## UNIVERSITY OF LONDON.

EXAMINATION

FOR THE DEGREE OF

BACHELOR OF ARTS

IN THE YEAR 1841.

LONDON:
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1841.
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## EXAMINERS.

In Classics.
Rev. Dr. Jerrard.
T. B. Burcham, Esq., M.A.

In Mathematics and Natural Philosophy.
George B. Jerrard, Esq., B.A. Rev. Robert Murphy, M.A.

In Chemistry.
Prof. Daniell, F.R.S.
In Animal Physiology. Francis Kiernan, Esq., F.R.S. Professor Sharpey, M.D., F.R.S.

In Vegetable Physiology and Structural Botany.
Rev. Professor Henslow, M.A.
In the French Lanyuage. M. Delilele.

In the German Language.
Rev. Dr. Bialloblotzky.

In the Hebrew Text of the Old Testament, the Greek Text of the New, and in Scripture History.

Rev. W. Drake, M.A.<br>Rev. T. Stone, M.A.

A 2

## UNIVERSITY SCHOLARS.

Mathematics and Natural Philosophy.
1839. Jacob Waley, B.A.
1840. No Scholarship awarded.
1841. No Scholarship awarded.

Classics.
1839. No Scholarship awarded.
1840. Joseph Gouge Greenwood, B.A.
1841. No Scholarship awarded.

## PASS EXAMINATION.

MONDAY, May 31.-Morning, 10 to 1.

# ARITHMETIC—ALGEBRA-PLANE TRIGO-NOMETRY-HYDROSTATICS, \&c. 

Examiner, Mr. Jerrard.

1. State the nature of the questions to which the Rule of Three is applicable; and show that a rule similar in principle may be applied to questions involving more than three quantities.

How many men can complete a trench of 468 yards in 8 days, if 24 men can dig 81 yards in 6 days?
2. Find the value of $\frac{\sqrt{ } \cdot \overline{012}}{\sqrt{2}+\sqrt{3}}$ to 4 places of decimals.
3. Given log. $3=\cdot 4771213, \log .7=8450980$, find the logarithm of 1323 and that of $1 \cdot 323$.

1323 is equal to $3^{3} \times 7^{2}$. What is the criterion of the divisibility of a number by 3 ?
4. In what time will a sum of money double itself at $3 \frac{1}{2}$ per cent. per annum compound interest?

$$
\begin{aligned}
\log .2 & =\cdot 3010300 \\
\log .1 \cdot 035 & =\cdot 0149403
\end{aligned}
$$

5. Determine by actual multiplication the expansion of
$(1-2 b)^{5}$. Divide $a-b^{2}$ by $a^{\frac{7}{4}}-b^{\frac{1}{2}}$. Also find the series which results from the division of 1 by $1+x$. What is the most simple form to which $\frac{3 x^{2}+6 x+3}{2 x^{3}+2}$ can be reduced ?
6. Solve the equations :-
(1.) $\frac{x}{2}+\frac{x}{3}-\frac{x}{4}=7$.
(2.) $\frac{1}{1+x}+\frac{1}{1-x}=\frac{8}{3}$.
(3.) $2 x+5 y=89$, $\}$
(4.) $\left.\begin{array}{r}x y=x-y, \\ x+y=1 .\end{array}\right\}$
(5.) $x^{2}-3 x-130=0$.
(6.) $7 \sqrt{2 x^{2}-10 x+3}=72+5 x-x^{2}$.
7. How many variations can be made of the letters in the word Lanyuage?
8. The sum of a decreasing arithmetic series is 140 , the first term 10, and the common difference $\frac{1}{3}$; find the number of terms.

Find the sum of 15 terms of the series

$$
1+\frac{1}{3}+\frac{1}{9}+\frac{1}{27}+. .
$$

9. Assuming the expression for $\sin (\alpha+\beta)$ and that for $\cos (\alpha+\beta)$, prove that

$$
\tan (\alpha+\beta)=\frac{\tan \alpha+\tan \beta}{1-\tan \alpha \tan \beta},
$$

and apply it to deduce the equation

$$
\tan \left(45^{\circ}+\beta\right)=2 \tan 2 \beta+\tan \left(45^{\circ}-\beta\right)
$$

for determining the tangents of angles greater than $45^{\circ}$.
10. Show that in any plane triangle

$$
c^{2}=a^{2}+b^{2}-2 a b \cos \mathrm{C}
$$

where $a, b, c$ are the sides, and C is the angle opposite to $c$. How may this expression be adapted to logarithmic calculation?
11. The pressure of fluids is equally diffused and varies as the depth. Prove the truth of this principle, and state some of the important practical results which are connected with it.
12. Define specific gravity. How may the specific gravity of a fluid be ascertained?
13. Explain the construction of the low-pressure doubleacting steam-engine of Watt, mentioning particularly the use of the separate condenser, and the contrivances for maintaining uniformity of action, and for adapting rectilinear to circular motion.

$$
\text { MONDAY, May 31.-AFTERNOON, } 3 \text { to } 6 .
$$

## CHEMISTRY, ANIMAL PHYSIOLOGY, VEGETABLE PHYSIOLOGY AND STRUCTURAL BOTANY.

## CHEMISTRY.

Examiner, Prof. Daniell.

1. Describe the formation of a thermometer, and the principles upon which its graduation is founded; illustrating the subject by reference to Fahrenheit's and the Centigrade scales.
2. How do you explain the cold which is found to prevail in the upper regions of the atmosphere? How can the phenomenon be illustrated by experiment?
3. Explain the construction and action of the Electrophorus.
4. Explain the principles of the Volta-type process.
5. What is meant by Chemical Equivalents? Explain the meaning, with reference to examples.
6. What is Alcohol? How is Sulphuric Ether produced from it? Explain the changes which take place during the process, both by words and symbols.

## ANIMAL PHYSIOLOGY.

Examiners, Mr. Kiernan and Prof. Sharpey.

1. Give a short account of the membranes of the brain; mention the classes of membranes to which they respectively belong, and adduce examples of similar membranes.
2. What changes does the food undergo in the stomach, and by what agency are they effected?
3. Give a short account of the structure of the secreting organ of the tears, and of the course the tears take from the secreting organ to the interior of the nose.
4. Explain the mode in which images of external objects are formed on the retina. What provision in the structure of the eye has been supposed to obviate spherical aberration?

## STRUCTURAL BOTANY AND VEGETABLE PHYSIOLOGY.

Examiner, Rev. Prof. Henslow.

1. Explain the terms Involucrum, Spatha, Placenta, Foramen.
2. Give a sketch of Estivatio valvata, and imbricata.
3. Describe the several parts in the trunk of Exogenous trees.
4. Describe the Folliculus, Bacca, and Pomum.
5. Describe the specimens $1,2,3$, with respect to the structure of the different organs.
6. From whence do plants derive their Carbon; and by what organs is it fixed?
7. Explain the function of Exhalation.

TUESDAY, June 1.-MorNING, 10 to 1.

## GREEK.

Examiner, Mr. Burcham.

## THUCYDIDES *, Book I.


























[^0]

 $\sigma \eta \varsigma$ тท̂s＇E入入áסos коьvฑ̂ $\pi \epsilon \mu \pi о ́ \mu \epsilon \nu о \iota$ ．







 $\pi \rho о ́ т \in \rho o \nu ~ \delta u a ̀ ~ M e \gamma a \rho e ́ a s ~ i ́ \pi o \psi i ́ a s ~ \sigma \hat{\omega} \phi \rho o \nu ~ v i \phi \epsilon \lambda \epsilon i ̂ v ~ \mu a ̂ \lambda \lambda o v ~ \dot{\eta}$

















 тòv $\beta a ́ p \beta a \rho o v ~ a v ̉ \tau o ̀ v ~ \pi \epsilon \rho i ̀ ~ a v ́ \tau 仑 ̂ ~ \tau a ̀ ~ \pi \lambda \epsilon i ́ \omega ~ \sigma \phi a \lambda \epsilon ́ v \tau a, ~ к a i ~ \pi \rho o ̀ s ~$ aủtov̀s тov̀s＇A $\theta \eta v a i o u s ~ \pi о \lambda \lambda a ̀ ~ \eta َ \mu a ̂ s ~ \eta ้ \delta \eta ~ \tau o i ̂ s ~ \dot{a} \mu a \rho \tau \eta ' \mu a \sigma \iota v ~ a u ̉-~$





























1. Mention the five divisions of the Pelopomesus. In which was Elis included? Point out some of the discrepancies with the rest of the Iliad in the Cutalogne of the Ships. Why is it more probable that the Homeric poems were originally preserved by oral tradition than by writing ?
2. What is the imoqia alluded to in the 2nd extract? Mention some of the principal events which took place in Greece between the end of the Persian and the commencement of the Peloponmesian war. From what place was Potidaa colonized? Who were the émionuloupyoi? State the first cause of the difference between Perdiceas and the Athenians.
3. What would be about the average amount of the free citizens in $\Lambda$ ttica? State the probable average number of the
free citizens, resident aliens, and slaves. What was about the proportion of the free population to the slaves? How many English geographical square miles does Attica contain?
4. What was the occasion of the first disagreement between the Athenians and Lacedæmonians after the Persian war, and to what immediate consequences did it lead? Mention the circumstances which immediately preceded the battle of Tanagra. Give the date of the battle of Oenophyta, its result and consequences.
5. Explain the construction in the following sentences:






 What is the foree of the article when used with ouvos and its cases? When only is the article used with the interrogative pronouns тoîos, tís?
6. Distinguish between клирои̂Хои, ӥтоикои, ётоикои. Describe the relation between a Grecian colony and the parent state. 'To what erent may the seattering of Grecian colonies over the coasts of the LEgean, Mediterrancan, and Euxine seas lee assigned? Give the names of the towns which formed the Ionian confederacy.

# TUESDAY, June 1.-AFTERNOON, 3 to 6. 

## LOGIC AND MORAL PHILOSOPHY.

## LOGIC.

Examiner, Rev. Dr. Jerrard.

1. Distinguish between Logic and Metaphysics. Point out some of the evils which have arisen from not attending to this distinction. What may we suppose to have been the origin of Logic ; and wherein consists its exact use?
2. What is the meaning of Abstruction? What of Generalization? Show that the former process may be carried on without the latter. How would you account for the origin of the error that Genus and Species are Real Thinys? What is the true character of the ideas denoted by general terms?
3. In the proposition "It is to be hoped that we shall succeed" which is the sulject and which the predicate? How does Whately show that the predicate of an affirmative proposition is never distributed? Whenee has arisen the observation that "it is difficult to prove a negative"? How far is this true? Why is it necessary to prove the converse of a mathematical proposition?
4. Define Syllogism. Enumerate the most celebrated objections which have been made to what is called "syllogistic reasoning," and point out the false assumptions on which they are severally based. Show that all legitimate argument must be capable of being reduced to the form of Syllogism.
5. How many legitimate varieties must there be in the form of the Syllogism? Of these how many are to be rejected as useless? What advantages in theory has the first figure over all the rest? Is the use of the second and of the third figure ever more convenient in practice; and if so, in
what kinds of argument? What objection is there to the employment of the fourth figure? Is it recommended by Aristotle?
6. If the minor premiss of a Syllogism be $O$, what is the figure and mood? Can you construct two Syllogisms, such that the major premiss of the one shall be the Subcontrary of the conclusion of the other, and the conclusions of both shall be true? If so, give an example. Are these data sufficient to determine the figure and mood of each ?

## MORAL PHILOSOPHY.

## Examiner, Mr. Burcham.

1. Distinguish between benerolence and self-love in the sense in which they are used by Butler. Siate the difference between emulation and enry as regards the means employed by either for the attainment of its end.
2. Why may the prevalence of the appetites or passions over the principle of comscience be considered as a violation of the constitution of man? Give Butler's arguments against the opinion that there is no difference between inward principles excepting that of strength.
3. How does Butler answer the question "What obligation is a man under to attend to, and follow the rule of right within himself"? What is meant by human nature, when it is said that virtue consists in following it, and vice in deviating from it?
4. Give Paley's definition of virtuc. Upon what, according to Palcy's theory, does the obligation to keep one's word depend? Show in what way the principle of habit is suited to our moral constitution.
5. In what sense are promises to be interpreted? Mention the cases in which they are not binding. What are the beneficial effects of the marriage institution?
6. In what eases is homicide justifiable? Give some of Palcy's arguments in opposition to the lawfulness of suicide.
7. What is an univocal and what an equivocul noun? What is meant by the first and the second intention of a word? What are categorical propositions, and into what two kinds are they divided?

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\text { WEDNESDAY, June 2.-Murnince, } 10 \text { to } 1 .
$$

## MATHEMATICS and NATURAL PHILOSOPlly.

Examiner, Rev. R. Murphy.

1. The angles, which one straight line standing on another makes with it, taken together are equal to two right angles.
2. A parallelogram is double of any triangle on the same base, and between the same parallels.
3. Given a segment of a circle, it is required to complete that circle.
4. If any quadrilateral be inscribed in a circle, the sum of its opposite angles shall be equal to two right angles.
5. Define similar figures, and show that equi-angular triangles are similar.
6. Draw a perpendicular to a plane, from a given point without it.
7. Find the equation to an ellipse referred to its axes, major and minor.
8. Assuming the parallelogram of forces, construct for the
resultant of any number of forces acting on a point, by means of a polygon.
9. Find the ratio of the power to the weight in the lever, and thence show how the true weight may be found from a false balance.
10. State the general laws of motion, and the grounds on which they rest.
11. The velocity acquired by a body after descending an inclined plane without friction, is the same as if it lad fallen directly through an equal vertical height.
12. Define the terms equator, ecliptic ; and explain clearly the apparent motion of the sun in the latter.
13. Give an account of the apparent ammal motions, both of the inferior and superior planets.
14. Describe the systems of astronomy which mreceded the Copernican, and state the proofs of the truth of the latter.

WEDNESDAI, Jume 2.-AFTERNOON, 3 to 6.

## HISTORY.

## GREEK AND ROMAN HISTORY.

Examiner, Rev. Dr. Jerrard.

1. What appears to be the most probable account of the early peopling of Grecee? What countries were inhabited by the Ionic, the Nolic and the Doric races, respectively? To what Grecian historians are we indebted for a knowledge of the aftairs of (1) the Assyrian, and (2) the Persian, Empire?

How long after the death of the elder Cyrus did the carliest of those historians live?
2. What part was taken by the principal states of Greece in the repelling of the Persian invasions? To what causes chiefly would you attribute the failure of those invasions?
3. How would you account for the great eminence of Athens among the Grecian states? Give a sketch of the condition of literature and the fine arts among the Athenians during the administration of Pericles. What circumstances most contributed to the ruin of their power?
4. Give a short account of the conquests of Alexander the Great in the East, and state the most striking effects of them. Mention as nearly as you can the date of each of the following events: (1) the siege of 'Tyre, ( 2 ) the invasion of Palestine, (3) the founding of Alexandria. What considerations appear to have induced Alewander to fix upon the site of the last-named city? Did sul)sequent events prove his foresight in this respect? What was the extent of the Macedonian Empire at the time of his death?
5. At what period does the History of Rome begin to be authentic? How long is this after the commencement of authentic Grecien Histery? What was the condition of the states of Grecce when first invaded by the Romans? Under what pretext was this conquest undertaken, and with what remarkable events was it attended?
6. State briefly the nature, origin, and progress of the Agrarian Law. Why is so much importance attached to it by Historians?
7. What erents immediately led to Cessars declaration of war against the Scnate? Had the way been previously prepared for the establishment of despotic power at Rome? What influence does the assassination of Cessar appear to have had upon the fate of the Republican party? How far were the forms of the Republic preserved by Augustus?

## ENGLISH HIS'ORY.

Extminer, Mr. Burcham.

1. Who was the prime mover of the resistance to the power of the Crown which led to the granting of Magna Charta? Enumerate the advantages secured thereby, (1) to the Churel, (2) to the Barons and their vassals, (3) to the Cities and Boroughs.
2. With whom did the Plantagenet dynasty end? What was the character of the English Constitution under it? Show in what way the peculiar situation of the English Aristrocracy has conduced to the establishment of the principles of liberty.
3. In what year was the Aet of the Six Articles passed? By what other name was it designated? Give a short account of its enactments. Through whose influence were its provisions afterwards mitigated?
4. Mention the circumstances which led to the passing the ‘Self-denying Ordinance and New Model.' Give a short account of the religions and political opinions of the Presbyterians, Independents and Erastians during the reign of Charles I.
5. What circumstance is commonly said to have produced the Act of Habeas Corpus? What really gave rise to it? Point out the error in supposing that this statute enlarged in a great decrree our liberties. What do you conceive to have been its real object?
6. Do you know any government, except our own, where hereditary and democratical power have been so blended as to maintain their respective influences? 'To what circumstances do you attribute the general harmony between the two legislative bodies in the English Constitution?
7. Trace historically the judicial power of the IIouse of Lords. Did it ever possess an original juriscliction? Give a short account of the contest between the two houses in the case of Skinner and the East India Company. What were its conclusion and consequence?
8. What is the earliest record of the existence of the House of Commons? Of how many English county representatives did it then consist? What counties were then excluded? What monarch extended the right of election to all the English counties except one? Which was the excepted county, and to what circumstance do you attribute its exception?

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\text { THURSDAY, June 3.-MORNING, } 10 \text { to } 1 .
$$

## CLASSICS.

Examiner, Rev. Dr. Jerrard.

Translate :
(A.) HORACE*, Od. IV. 9.

Ne forte credas interitura, quæ
Longe sonantem natus ad Aufidum
Non ante vulgatas per artes
Verba loquor socianda chordis.
5 Non, si priores Mæonius tenet Sedes Homerus, Pindaricæ latent, Ceæque, et Alcæi minaces

Stesichorique graves Camenæ: Nec, si quid olim lusit Anacreon,
10 Delevit ætas: spirat adhuc amor,
Vivuntque commissi calores
Eoliæ fidibus puellæ.
Non sola comtos arsit adulteri

[^1]Crines, et aurum vestibus illitum
15 Mirata, regalesque cultus
Et comites, Helene Lacæna:
Primusve Teucer tela Cydonio
Direxit arcu: non semel Ilios Vexata: non pugnavit ingens
20 Idomeneus Sthenelusve solus
Dicenda Musis prœlia: non ferox
Hector, vel acer Deïphobus graves
Excepit ictus pro pudicis
Conjugibus puerisque primus.
25 Vixere fortes ante Agamemnona
Multi; sed omnes illacrimabiles
Urguentur, ignotique longa
Nocte, carent quia vate sacro.
(B.) Epod. V.

Ut hæc tremente questus ore constitit
Insignibus raptis puer,
Impube corpus, quale posset impia
Mollire Thracum pectora;
15 Canidia, brevibus implicata viperis
Crines et incomtum caput,
Jubet sepulcris caprificos erutas,
Jubet cupressus funebres, Et uncta turpis ova ranæ sanguine, 20 Plumamque nocturnæ strigis, Herbasque, quas Iolcos atque Iberia

Mittit venenorum ferax,
Et ossa ab ore rapta jejunæ canis,
Flammis aduri Colchicis.
25 At expedita Sagana, per totam domum
Spargens Avernales aquas,
Horret capillis, ut marinus, asperis,
Echinus, aut Laurens aper.

## (C.) Epist. I. 1.

45 Impiger extremos curris mercator ad Indos, Per mare pauperiem fugiens, per saxa, per ignes; Ne cures ea quæ stulte miraris et optas, Discere et audire et meliori credere non vis? Quis circum pagos et circum compita pugnax 50 Magna coronari contemnat Olympia, cui spes, Cui sit conditio dulcis sine pulvere palmæ? Vilius argentum est auro, virtutibus aurum. O cives, cives! quærenda pecunia primum est, Virtus post nummos! Ifrec Janus summins ab imu
55 Prodocet: hace recinunt jurenes dictata senesque, Lævo suspensi loculos tabulamque lacerto. Si quadringentis sex septem millia desunt, Est animus tibi, sunt mores, et lingua filesque, Plebs eris. At pueri ludentes, Rex eris, aiunt, 60 Si recte facies. Hic murus aeneus esto, Nil conscire sibi, nulla pallescere culpa. Roscia (dic sodes) melior lex, an puerorum est Nænia, quæ regnum recte facientibus offert, Et maribus Curiis et decantata Camillis?

> (D.) Ep. ad Pis.

Tibia non, ut nunc, orichalco vincta, tubæque Amula, sed tenuis simplexque foramine pauco, Adspirare et adesse choris erat utilis, atque
205 Nondum spissa nimis complere sedilia flatu; Quo sane populus numerabilis, utpote parvus Et frugi, castusque verecundusque, coibat. Postquam coppit agros extendere rictor, et urbem Latior amplecti murus, vinoque diurno
210 Placari Genius festis impune diebus, Accessit numerisque modisque licentia major. Indoctus quid enim saperet liberque laborum Rusticus urbano confusus, turpis honesto ?
Sic priscæ motumque et luxuriem addidit arti
215 Tibicen, traxitque vagus per pulpita vestem.

Sic etiam fidibus voces crevere severis, Et tulit eloquium insolitum facundia preceps, Utiliumque sagax rerum, et divina futuri, Sortilegis non discrepuit sententia Delphis.

1. (A.) In what other parts of his writings does Horace refer to any of the Poets mentioned in this extract? To which of them is he indebted for any of his metres? Quote other passages from him in praise of Poetry.

Why is it lusit, not luserit? Explain the constructions "comtos arsit ... crines"-" Dicenda Musis prolia," and (C.) "magna coronari ... Olympia."
2. (B.) What evidence do other classic authors afford us of the prevalence among the Romans of the belief in Magic? Does this extract remind you of any passage in a great modern poet?
3. (C.) Give brief explanatory notes on this passage where they seem to you to be required. Do you conceive any change to be necessary in the order of the lines 57 and 58 ?
4. (D.) Why is the second syllable of tibicen long, and that of fidicen short? Give an outline of the Ars Poctica with quotntions.
5. . . . . carmen sequar ut sibi quivis Speret idem, sudet multum frustraque laboret Ausus idem.
How do you accome for the common mistake here alluded to? What do you regard as the distinguishing excellence of the Odes of Horace? Does Bentley appear to you to he successful in his attempt to correct him in the line
"Qui siccis oculis monstra natantia" by substituting rectis for siccis?
6. Nullius addictus jurare in verba magistri Quò me cunque ferat tempestas deferor hospes. What proofs do Horace's works furnish of the very changeable nature of his philosophical opinions? Does he appear to have grown less worldly-minded as he grew older?

THURSDAY, June 3.-AFTERNOON, 3 to 6.

## FRENCH. GERMAN.

## FRENCH.

Examiner, M. Delille.

## Translate into English:

BOSSUET, Discours sur l'Histoire universelle, $3^{\text {ième }}$ partie.
Quand vous voyez passer comme en un instant devant ros yeux, je ne dis pas les rois et les empereurs, mais ces grands empires qui ont fait trembler tout l'univers ; quand vous voyez les Assyriens anciens et nouteaux, les Mèdes, les Perses, les Grecs, les Romains se présenter devant rous successivement, et tomber, pour ainsi dire, les uns sur les autres: ce fracas effroyable vous fait sentir qu'il n'y a rien de solide parmi les hommes, et que l'inconstance et l'agitation est le propre partage des choses humaines.

Mais ce qui rendra ce spectacle plus utile et plus agréable, ce scra la réflexion que vous ferez, non sculement sur l'élévation et sur la chute des empires, mais encore sur les causes de leur progrès et sur celles de leur décadence.

Car ce même Dieu qui a fait l'enchainement de l'univers, et qui, tout-puissant par lui-même, a roulur, pour établir l'ordre, que les parties d'un si grand tout dépendissent les unes des autres; ce même Dieu a roulu aussi que le cours des choses humaines cût sa suite et ses proportions: je veux dire que les hommes et les nations ont eul des qualités proportionnées à l'élération à laquelle ils étaient clestinés; et qu’à la réserve de certains coups extraordinaires, où Dicu voulait que sa main parût toute scule, il n'est point arrivé de grand changement qui n'ait en ses causes dans les sièeles précédents.

## Translate into French:

Difficulty is a severe instructor, set over us by the supreme ordinance of a parental guardian and legislator, who knows us better than we know ourselves, as he loves us better ton... IIe that wresties with iss, strengethens our nerves, and sharpens our skill. Our antagonist is our helper. This amicable conflict with difficulty obliges us to an intimate acquaintance with our object, and compcls us to consider it in all its relations. It will not suffer us to be superficial.-Burke.

## P'ublic S'chools in France established by Charlemagne.

The establishment of public schouls in France is owing to Charlemagne. At his accession, we are assured that no means of education existed in his dominisms; and in order tor restore in some degree the spirit of letters, he was compelled to invite strangers from conutries where learning was not so thoroughly extinguished. Alcuin of England, Clement of Ireland, Theodulf of Germany, were the true l'aladins who repaired to his court. With the help, of these he revived a few sparks of diligence, and established sehools in different cities of his empire ; nor was he ashamed to the the disciple of that in his own palace under the care of Alcuin.

## Foundation of the University of Paris.

About the latter part of the cleventh century, a greater ardour for intellectual pursuits began to show itself in Europe, which in the tweltih broke out into a flame. This was manifested in the numbers who repaired to the pulblic academies, or schools of philosophy: None of these grew so early into reputation as that of Paris. This cammot indece, as has been vainly pretended, trace its pedigree to Charlemagne. The first who is said to have read lectures at l'aris was Remigius of Auxerre, about the year !00\%. For the next two centuries the history of this school is very obsecure; and it would be hard to prove an unbroken continuity, or at least a dependence and comnexion of its professors. In the year 1100 , we find William of Champeaux teaching logic, and apparently
some higher parts of philosophy, with much credit. But this preceptor was eclipsed by his disciple, afterrards his rival and adversary, Peter Abclard, to whose brilliant and hardy genius the university of Paris appears to be indebted for its rapid advancement. Abelard was almost the first who awakened mankind in the ages of darkness to a sympathy with intellectual excellence... The resort of students to Paris became continually greater; they appear, before the year 1169 , to have been divided into mations; and probably they had an elected rector and voluntary rules of discipline about the same time. This, however, is not decisively proved; but in the last year of the twelfth century, they obtained their carliest charter from Philip) Augustus.-Hallam, State of Europe during the Middle Ages.

Translate into English:

## MOLIERE, Les Femaes Shinutes, comédie, Acte II. Scène VI.

Pililaminte, femme de Chrysale. Bélise, seur de Chrysale. Curysale, bon bourgenis. Martine, servante de cuisine.

## philaminte, apercevant Martine.

Quoi! je vous vois, maraude:
Vite, sortez, friponne; allons, quittez ces lieux;
Et ne vous présentez jamais devant mes yeux.
chirysale.
Tout doux.
philaminte.
Non, c'en est fait.

> chrysale.

Hé!

## PHILAMINTE

Je veux qu'elle sorte.

CHRYSALE.
Mais qu'a-t-clle commis, pour rouloir de la sorte...? philaminte.
Quoi! vous la soutenez! CHRYSALE.

En aucune façon.
PHILAMINTE.
Prenez-vous son parti contre moi? chrysale.

Mon dieu! non;
Je ne fais seulement que demander son crime.
philaminte.
Suis-je pour la chasser sans cause légitime? chrysale.
Je ne dis pas cela; mais il faut de nos gens...
pililaminte.
Non; elle sortira, vous dis-je, de céans. chrysale.
Hé bien! oni. Vous dit-on quelque chose lì-contre? WHILAMINTE。
Je ne veux point d'obstacle aux désirs qque je montre.
CHRYSALE.
D'accord.
philaminte.
Et vous devez, en raisonnable époux,
litre pour moi contre elle, et prendre mon courroux.
chrysale.
(Se tournant vers Martine.)
Aussi fais-je. Oui, ma femme avec raison vons chasse, Coquine, et votre crime est indigne de grâce.

## martine.

Qu'est-ce donc que j'ai fait?

> cirysale, bas.

Ma foi, je ne sais pas.

## philhaminte.

Elle cst d'humeur encore à n'en faire aucun cas.

CIRYSALE.
A-t-elle, pour donner matière à votre haine, Cassé quelque miroir ou quelque porcelaine? PHILAMINTE.
Voudrais-je la chasser? et vous figurez-vous
Que pour si peu de chose, on se mette en courroux? CHRYSALE.
(ì Mrartine.) (à Philaminte.)
Qu'est-ce à dire? L'affaire est donc considérable?
PHILAMINTE.
Sans doute. Me voit-on femme déraisonnable?
CIMRYSALE.
Est-ce qu'elle a laissé, d'un esprit négligent, Dérober quelque aiguière ou quelque plat d'argent? PHILAMINTE.
Cela ne serait rien.
CIRYSALE.
(à Martine.)
Oh! oh! peste, la belle!
(à Philaminte.)
Quoi! l'avez-vous surprise à n'être pas fidèle?
PHILAMINTE.
C'est pis que tout cela.

## CIRYSALE.

Pis que tout cela?
PHILAMINTE.
Pis.

## CIIRYSALE.

(à Philaminte.)
(à Martine.)
Comment! diantre, friponne! Euh! a-t-elle commis?... PHILAMINTE.
Elle a, d'une insolence à nulle autre pareille, Après trente leçons, insulté mon oreille
Par l'impropriété d'un mot sauvage et bas, Qu'en termes décisifs condamne Vaugelas.

CHRYSALE.
Est-ce là... ?

PIILAMINTE.
Quoi! toujours, malgré nos remontrances, Heurter le fondement de toutes les sciences, La grammaire, qui sait régenter jusqu'aux rois, Et les fait, la main haute, obéir à ses lois ! CHRYSALE.
Du plus grand des forfaits je la croyais coupable. PHILAMINTE.
Quoi! vous ne trouvez pas ce crime impardomable? CHRYSALE.
Si fait.

## PHILAMINTE.

Je voudrais bien que vous l'excusassiez?
CHRYSALE.
Je n'ai garde.
bélise.
Il est vrai que ce sont des pitiés.
T'oute construction est par elle détruite;
Et des lois du langage on l'a cent fois instruite.
MARTINE.
Tout ce que vous prêchez est, je cróis, bel et bon;
Mais je ne saurais, moi, parler votre jargon.
PHILAMINTE.
L'impudente! appeler un jargon le langage Fondé sur la raison et sur le bel usage!

MARTINE.
Quand on se fait entendre, on parle toujours bien ; Et tous vos biaux dictons ne servent pas de rien.

## PHILAMINJE。

Hé bien! ne voilà pas encore de son style?
Ne servent pas de rien!
bélise.
Ô cervelle indocile!
Faut-il qu'avec les soins qu'on prend incessamment,
On ne te puisse apprendre à parler congrûment?
De pas mis avec rien tu fais la récidive;
Et c'est, comme on t'a dit, trop d'une négative.

MARTINE.
Mon dieu! je n'avons pas étugué comme vous, Et je parlons tout droit comme on parle cheux nous. PHILAMINTE.
Ah! peut-on y tenir!
BELISE.
Quel solécisme horrible!
PHILAMINTE.
En voilà pour tuer une oreille sensible.
BÉLISE.
Ton esprit, je l'avoue, est bien matériel !
Je n'est qu'un singulier, avons est pluriel.
Veux-tu toute ta vie offenser la grammaire?
MARTINE.
Qui parle d'offenser grand'mère ni grand-père?
PHILAMINTE.
Ô ciel!
Bélise.
Grammaire est prise à contre-sens par toí,
Et je t'ai déjà dit d'où vient ce mot.
martine.
Ma foi,
Qu'il vienne de Chaillot, d'Auteuil ou de Pontoise, Cela ne me fait rien.

> bélise.

Quclle âme villageoise!
La grammaire, du verbe et du nominatif, Comme de l'adjectif avec le substantif, Nous enseigne les lois.

MARTINE.
J'ai, madame, à vous dire
Que je ne connais point ces gens-là.
PHILAMINTE.
Quel martyre!
BÉLISE.
Ce sont les noms des mots; et l'on doit regarder Eur quoi c'est qu'il les faut faire ensemble accorder.

MARTINE.
Qu'ils s'accordent entre cux ou se gourment, qu'importe?
philaminte, à Bélise.
Hé! mon dieu! finissez un discours de la sorte.
(à Chrysale.)
Vous ne voulez pas, vous, me la faire sortir?
CHRYSALE.
(à part.)
Si fait. À son caprice il me faut consentir. Va, ne l'irrite point; retire-toi, Martine.

PHILAMINTE.
Comment! vous avez peur d'offenser la coquine?
Vous lui parlez d'un ton tout ì fait obligeant.
CHRYSALE.
(D'un ton ferme.) (D'un ton phus doux.)
Moi? point. Allons, sortez. Va-t'en, ma pauvre enfant.

## GERMAN.

Examiner, Rev. Dr. Bialloblotzky.
'Translate into English :
\{in bie $\mathfrak{L a n b}$ fänoe am 18ten Detofer.
Iu Ebhlabt iar Bolfor, waro getidlagen, Der Frembe swidh von beutcher Frur, Doch bie Gefreiter \&anbe tragen Toch manders vorgen Drangez ভpur;
$H_{11}$ wie man aus verrmfinen Stäoten
(Frtbabne Böttervilber gräbt,
So ift mand beilig Recht $z^{4}$ retten,
Daち unter wîften Trimmen leछt.
30 retten gitt ${ }^{3}$ แmo aufubauen,
Doch bab Bebeiten bleifet ferut,
$\mathfrak{2 P O}_{0}$ Liebe feblet uno 彐ertraten
Hind (Fintradit zwifdem Bolf uns. Wirnn.

Der Deutidue clyrt in amen Beiten
Der Fiurfen beiligen ふeruf；
Doch liebt er，frei einberguidureiten
Uno aufrecht，wie ifn Gott eriduf．
Go wirft audb ibr imf fefen Bumbe， Jit guter நiiter unfes Recht
Jib bauct auf bem alten Grumbe
Da૬ Wobl de fünftigen（Geichlecht？

Seyo ith Eebarrlidy，emfig，trell；
De马̉ Bolfes Witroe，wie dez さhrones， Weachet ify mit Leil＇ger Sdjet．

## Translate into German ：

It is cvident that all the tongues spoken by the great peo－ ple whom the Romans called Geranavi，considered on a large scale，appear as dialects all issuing from one common source． There was a time when all these languages were one．If we could mount sufficiently high in the scale of time，we should arrive at the period when the progenitors of all the tribes were gathered rithin the compass of a little camp under a few tents，and spoke one language，containing the germs of all the diversities by which the dialects of their posterity were distinguished．The nearer we approach this time and place the more will all the Germanic tongues become similar to each other，and their boundarics vanish by which at present they are inclosed．For this reason the oldest and best poet of the Greeks，retaining marks of a particular dialect，blends in his poems all the dialects of Greece．In regard to anti－ quity，the Gothic of Ulphilas，being written about A．D．360， has the precedence of any Anglo－Saxon Manuscripts by four or five hundred years．In comparing the Anglo－Saxon with the Gothic，we shall have the double advantage of measuring by a standard approaching nearest the genuine dimensions， and of coming into a nearer contact with those kindred tongues which subsequently became more strikingly dif－ ferent．

The nearer we approach the source, the more pure will be the stream. If the development of language were left to its natural course, without any disturbing shock or foreign influence, all things would change according to the established rules of nature, and crery word bear in its changes some resemblance to its primitive state. But every age brings on some disturbance of the system, and the intermisture of foreicgn ingredients, originating in wars, migrations, revolutions, and other causes, introduces so many changes, that in some respects the rule is overthrown by the exceptions, and the language rendered almost unfit for comparison. A sutiocient reason can be given for the present state of disorder only by ascending to the period of order, and not by a comparison of the dialects lyiner in their present confusion. Now, the higher the step on which we can observe the laneuare, the less it is distubed in its oriminal structure, and the better adapted for the standard of comparison. It is the high age of the Gothic, and its real chameter, known by what is remaining of it, which in these respects stamp its value. Spoken by one unmixed tribe of warriors, it appears on the stage fresh and mpolluted, quite mirginal, and sui generis, with members of due proportion, and dressed in its own native costume, without a shred of foreign ornament.

Translate into English:










 2)





 mer unterftiikgten.

 (Gwitlanm) in Eolo genommen muten, tut gegen bie aut Ealcoonien bretemen Whiten timo Eioten jth fibtern. Ia fie




 uno Biturn gefdmirfte Jimel, Dimviefer.


 mäfiger (Erobertmg fam bier nitht molro dic Piee font. Se-

 ebrgeizigen Gemiitberm werfer.

## EXAMINATION FOR IIONOURS.

## EXAMINATION FOR HONOURS.

MATHEMATICS<br>AND<br>NATURAL PHILOSOPHY.

TUESDAY, June 8.-Morning, 10 to 1.

# ALGEBRA, INCLUDING THE THEORY OF EQUATIONS.-ANALYTICAL GEOMETRY. 

Examiner, Mr. Jerrard.

1. What conditions must be fulfilled in order that $\sqrt[n]{a+\sqrt{b}}$ may be reducible to the form $(\Lambda+\sqrt{\bar{B}}) \sqrt[n]{\text { C? }}$ Extract the cube root of $1635-618 \sqrt{7}$.
2. Determine the positive and integral values of $x$ and $y$ which will satisfy the indeterminate equations
(1.) $5 x+24 y=109$,
(2.) $x^{2}-17 y^{2}=1$;
respectively.
3. The sum of the $m$ th powers of the roots of any algebraie equation may be expressed in terms of the coefficients.
4. Explain Euler's method of solving biquadratic equations.
5. Investigate the equation

$$
\cos \theta \pm \sqrt{-1} \sin \theta=\epsilon \pm \theta \sqrt{-1}
$$

and deduce De Moivre's theorem from it.
6. Find the equation to the ellipse referred to any system of conjugate diameters.
7. From a given point draw a tangent to a parabola.
8. Determine the curve represented by the equation

$$
y^{2}+2 x y-2 x^{2}-4 y-x+10=0
$$

9. Show the identity of curres of the second degree with the sections of a cone by a plane.
10. Of all the spherical triangles formed with two given sides, the greatest is the one in which the included angle is equal to the sum of the other two angles.
11. Find the equation to a plane which passes through a given point, and is parallel to a given plane.
12. Discuss the different kinds of surfaces represented by the equation

$$
\mathrm{M}_{1} x^{2}+\mathrm{M}_{2} y^{2}+\mathrm{M}_{3} z^{2}+\mathrm{P}=0 .
$$

## TUESDAY, June 8.-AFTERNOON. 3 to 6.

## DIFFERENTIALand INTEGRALCALCULUS, \&ic.

Eaaminer, Rev. R. Murphy.

1. By what methods were the areas of curves fomed previous to the invention of the differential calculus? State the bases of the methods of Newton, Maclaurin, and Lagrange.
2. State and prove Taylor's theorem for the expansion of $f(x+h)$ according to the powers of $h$. In what cases will the assigning a certain value to $x$ cause the failure of the expansion? and why?
3. Find all the conditions necessary that a function of one variable may be a maximum or minimun, distinguishing between them. Is an example, find the length of the shortest right line passing through a given point, and bounded by two rectangular axes.
4. Investigate the analytical characteristics of multiple points, points of contrary flexure, and isolated points in a plime curve. Find the condition that the lines represented by the equation $\left(x^{2}+y^{2}-a^{2}\right)(y-b x-c)=0$, may have one or two multiple points, or none.
5. Find the equations to the tangent and normal of a curve of double curvature, and give an example in the common helix.
6. Find the plane sections of greatest and least curvature passing through a given point of a curve surface, and their relative position.
7. Prove that

$$
\int_{x}^{0}(y)=\text { const. }+y x-\frac{d y}{d x} \cdot \frac{x^{2}}{1 \cdot 2}+\frac{d^{2} y}{d x^{2}} \cdot \frac{x^{2}}{1 \cdot 2 \cdot 3}-\& c_{c},
$$

and explain the failure of this formula when $y=\frac{1}{x}$, and in other cases.
8. Integrate, generaliy, the following differential cocfficients relative to $x$ :
(1.) $\frac{1}{(x-a)^{n} \cdot(x-b)}$
(2.) $x^{3} \sin x$
(3.) $\frac{1}{(a+x) \sqrt{b+c x+e x^{2}}}$
(4.) $\frac{1}{a+b \cos x}$ and (5.) $\varepsilon-a x^{2}$
between the limits of 0 and $\infty$.
9. In the following system of , linear equations, fund the relation between $\pi_{1}$ and $X$ expressed in a linear equation of the $n$th order; and conversely; show how the latter may be decomposed into linear equations of the first order in all cases, viz.

$$
\begin{aligned}
& \frac{d u_{1}}{d x}+a_{1} u_{1}=u_{2} ; \quad \frac{d u_{2}}{d x}+a_{2} u_{2}=u_{3} ; \quad \frac{d u_{3}}{d x}+a_{3} u_{3}=u_{4} ; \\
& \ldots \ldots \ldots \frac{d u_{n}}{d x}+a_{n} u_{n}=\mathrm{X} .
\end{aligned}
$$

10. Show how to find the trajectory of a curve, intersecting at a given angle a series or eurves, generated by varying a parameter, in their general equation.
11. (Give an account of the method for integrating partial difterential equations of the first order, and integrate the homogeneous and linear equation

$$
\frac{d^{2} z}{d x^{2}}+a \frac{d^{2} z}{d x d y}+b \frac{d^{2} z}{d y^{2}}=f(x, y) .
$$

12. Find the wth successive finite differcnces of $\frac{1}{x}, \sin x$, $\cos (x), a^{x}$, the increment of $x$ being unity.
13. Investigate Bernouilli's numbers ( $B_{2 n}$ 位 $)$, and explain their use in summing series.
14. Find the conditions that $\int_{x} V$ may be a maximum or minimum, while another function $\int_{\tau}^{\circ} \mathrm{U}$ is constant.

WEDNESDAY, June 9.-MORNING, 10 to 1.

# MECIANICS—HYDROSTATICS, \&c. 

Examiner, Mr. Jerrard.

1. Investigate the equation of equilibrium of a lever acted upon by any forces in the same plane. Upon what does the sensibitity of a balance depend?
2. Determine the positions in which a paraboloid will rest upon a horizontal plane.
3. What condition must be fulfilled in order that any number of forees acting in different planes upon a body of invariable form may have a single resultant?
4. The rolume generated by the revolution of a plane surface round an axis is equal to the area of that surface multiplied by the circumference of the circle described by its centre of gravity. lrove this theorem, and apply it to find the volume of a sphere.
5. Investigate the motion of a homogencous sphere projected vertically upwards in a medium of which the resistance varies inversely as the square of the velocity.
6. How does it appear, from the general equations of motion, that, when a material point in motion is subjected to a force constantly directed to a fixed centre, the areas described around the centre by the radius vector are proportional to the times employed in describing them?
7. Determine the time of the oscillation of a pendulum in a cyeloidal are. If the lengeth of a pendulun be slightly altered, show how to determine the number of seconds lost or gained in a day.
8. When a fluid mass acted upon by any forces is in a state of rest, find the pressure at any point.
9. Describe the diving-bell; and find the space occupied by the air in the bell at any depth below the stuffece.
10. Determine the centre of pressure of a semicirele immersed in a fluid with the diameter perpcidicular to, and just reaching, the surface.

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\text { WEDNESDAY, June 9.-AFTERNOON, } 3 \text { to } 6 .
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## OPIICS—HEAT-AS'RRONOMY.

Examiner, Rev. I. Murpiy.

1. A ray of light is inceident on a surface of revolution in a plane passing through its axis, -find the direction of the reflected ray.

2 . Required the longitudinal and lateral aberrations of a spherical reflector, generally.
3. Give an account of the methods used for finding the refractive indices of media.
4. Find the relation between the conjugate foci of a lens, taking account of its thickness.

Example. Lens, double comeer; radius, 16 feet; thickness, 1 inch; incident rays, perrallel; index of refraction 1.53 .
5. Find the vistual angle for a small object distinctly seen through a lens.
6. Describe the Galilean and Gregorian telescopes.
7. Find the relation necessary that two prisms may produce achromatism in vacuo.
8. Investigate an equation for the flux of heat in a homogencous sphere.
9. Find the quantity of disengaged caloric, when a volume of gas is compressed.
10. Give an account of the probable distribution of terrestrial heat in the solid, liquid, and gaseous portions of the globe, and of some of the physical consequences thence arising.
11. Find the deviation in azimuth of a transit instrument by the times of transit of a circumpolar star.
12. Explain Flamsteed's method of finding the sun's right ascension.
13. Define the tropical, sidereal, and anomalistic years, and explain the intercalations in the calendar.
11. Given the latitude and longitude of a star, atfected by parallax ; show how their true values may be found.
15. Find the daily retardation of the moon's rising, and thence explain the phanomenon of the harrest moon.
16. Explain the principles of the construction of Madley's sextant, and the uses to which it is applied.

## THURSDAY, June 10.-MORNING, 10 to 1.

Examiner, Mr. Jerrard.

1. Show that the solution of any recurring equation of $m$ dimensions may be reduced to that of an equation of not more than $\frac{m}{2}$ dimensions.
2. Every prime number of the form $4 n+1$ is the simm of two squares.
3. Expand the function $\frac{1}{\sqrt{ }\left(a^{2}-2 a b \cos \theta+b^{2}\right)}$ in a series of the form

$$
C_{0}+C_{1} \cos \theta+C_{2} \cos 2 \theta+\ldots
$$

and show how each coefficient may be determined from the two coefficients immediately prececling it.
4. Investigate Legendre's theorem, if each of the angles of a spherical triangle, the sides of which are very small compared with the radius of the sphere, be diminished by a third part of the difference between the sum of its three angles and two right angles, the angles so diminished may be taken as the angles of a rectilinear triangle, the sides of which are equal in length to those of the spherical triangle.
5. A conic section is determined when one of the foci and three points of the curve are known.
6. Express the moment of inertia of a body with respect to any axis in terms of the three principal moments at its centre of gravity.
7. Find the attraction of an oblate spheroid on a particle placed at its pole.
8. Explain the method of determining the surface of a fluid contained in a vertical capillary tube.
9. Investigate the motion of a fluid flowing through a horizontal orifice in the base of a vessel, stating the hypothesis on which you proceed.

THURSDAY, June 10.-AFTERNOON, 3 to 6.

## PROBLEMS.

Examiner, Rev. R. Murpiy.

1. Represent, by means of a definite integral, the exact amount of the error which is produced when we take the first $n$ terms of 'Taylor's expransion instead of all the terms. Example, $(x+h)^{n l}$.
2. Expand $x$ according to the powers of $y$, and $y$ according. to the powers of $x$, in the equation $x=-\frac{y}{1+a b}+\phi(x)$ where $\phi(x)=\frac{a x^{2}}{1+a x}+\frac{b}{1+a b}$ (by Maclaurin's Theorem). For what reason are both series of exactly similar forms?
3. Find the general integral of $\frac{8+7 \sin x}{(1+2 \sin x)^{4}}$ and the definite integral of $\frac{\sin x}{x} \cos \frac{x}{2}$ from $x=0$ to $x=\infty$. Integrate also the differential equation $\frac{d y^{2}}{d x^{2}}+a y \frac{d y}{d x}+b x=0$.
4. Required the evolute of an ellipse.
5. Determine the quantities $u_{1}, u_{2}, \ldots u_{n}$, so that for all values of $n, u_{1}^{3}+u_{2}^{3}+\ldots \ldots u_{n}^{3}=\left(u_{1}+u_{2}+\ldots \ldots u_{n}\right)^{2}$. Also integrate by parts the finite difference $u_{x} \Delta u_{x}$ in a series, and apply your result to the summation of the series $\cos \theta$ $-4 \cos 2 \theta+9 \cos 3 \theta-16 \cos 4 \theta$, \&c., to $n$ terms.
6. Find the chance that an event of given probability will not happen or fail 3 times successively in the first 6 trials out of 7 , but that it will happen on the 5 th, 6 th, and 7 th trials.
7. Describe the reflecting Goniometer.
8. When light emanates from two luminous points (near each other) in a darkened chamber, describe the phenomena resulting from interference.
9. State the phremomen of the separation and polarization of light by doubly refracting crystals. What analogies exist between light and heat polarized?
10. Given the radii of the surfaces of a thin lens, find the distances of the foci when the longitudinal aberration is a minimum.
11. When is that part of the equation of time due to the obliquity additive? Required its maximum amount.
12. Find the mutual inclinations of the orbits of two planets; having given their inclinations to the ecliptic, and the heliocentric longitudes of their nodal lines.
1.3. Find the time, on a given day, when the ascending point
of the ecliptic makes the nearest "pproach to the meridian of a given place.
13. Describe the construction of a sum-dial in a given fertical plane.
14. Find the amoular motion of a planet round the empty focus of its elliptic orbit.
15. How would you account for the following phanomena of vision?
I. Under the same visual angle, a much greater portion of the solar dise is seen near its circumference than at its centre, yet the apparent luminosity is the same.
II. The images of objects painted on the retina are inverted, yet the objects appear erect, \&c.
III. Though a distinct imarge of a single objert is formed on the retina of each eye, yet the object does not appear double.
IV. If the optic axes of a portrait appear directed to you when you view it in one position, they will continue so to do however you alter your situation.

## CHEMISTRY.

Examiner, Professor Daniell.

## MONDAY, June 14.-Morning, 10 to 1.

1. How may the comparative value of two lights be estimated by the shadows which they project?
2. To what are the colours upon a soap-bubble owing? and what would be the appearance of the same bubble in homogeneous light?
3. Compare the phenomena which result from the light. and heat of a lamp impinging upon a conver lens of flintglass with those from the same rays falling upon a similar lens of pure rock-salt.
4. Describe and explain the hest methods of estimating the dryness of the atmosphere.
5. What would be the volume, at 0.50 Fahr., of 100 cubic inches of air measured at $32^{\circ}$ Fahr.?
6. Describe the principal phamomena and explain the causes of the Trade Winds.
7. Describe the construction and explain the action of the Galvanometer.
8. Describe the construction and explain the action of the Voltameter.
9. Explain the action of the common Electrical Machine, and particularly the mode in which the charge is communicated to and retained by the prime conductor.
10. What is the doctrine of Latent Heat? and how was it established by Dr. Black ?
11. In what way, and upon what principle, has it been proposed to calculate the heights of mountains from the boiling of water?
12. Is there any difference in the quantities of heat which
are required to raise different bodies to the same temperature? and in what way may such differences be measured if any exist?

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\text { MONDAY, June 14.-AFTERNOON, } 3 \text { to } 6 .
$$

13. What is meant by double-elective uffinity? Explain with reference to an example.
14. Describe and explain the principal processes for the production of Sulphuric Acid.
15. What is the constitution of Water? and in what manner does it enter into secondary combination?
16. Describe the formation and principal properies of Phosphorus: the constitution of Phosphoric Acid, and the relations of the latter to water.
17. State the principal eneneral wiews which may be taken of the Constitution of Salts.
18. Describe by words and symbols the phamomena which take place when Nitrate of Ammonia is gradually exposed to heat.
19. How would you proceed to detect IIydrocyanic Acid in solution by means of sulphate of iron? Explain the phemomena which take place in the process.
20. What do you mean by an Electrolyte? What are the principal laws of Electrolysis?
21. By what tests could you distinguish Chloride of Barium from Chloride of Strontium in solution? and how could you separgate Chloride of Calcium from Chloride of Magnesium?
22. Describe the best process for the analysis of organic products, and explain the principles upon which it is founded.
23. Describe and explain the process of the Vinous Fermentation.
24. How is Bicyanide of Mercury prepared? What are the products of its decomposition by heat? and by sulphuretted hydrogen ?

# ANIMAL PHYSIOLOGY. 

Examiners, Mr. Kiernan and Prof. Silarpey.

## TUESDAY, June 15.-Morning, 10 to 1.

1. What division of the elementary textures has been founded on their chemical composition? Enumerate the textures comprehended in each division. Describe the muscular tissue, and its respective characters in the muscles of animal and organic life.
2. Explain what you conceive to be the office of the different parts of the car; adducing, along with other evidence, such illustration as may be derived from a comparison of the structure of the organ in different animals.
3. What has been ascertained respecting the functions of the spinal nerves, and on what evidence is our knowledge of their functions founded?

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\text { TUESDAY, June 15.-AFTERNOON, } 3 \text { to } 6 .
$$

1. Describe the conditions of the circulating and respinatory organs of the Frog in its different stages of development.
2. The physical properties and chemical constitution of the chyle, its differences in different parts of the chyliferous system, and the points of resemblance and of difference between the chyle and the blood.
3. In what does the function of respiration essentially consist, and what conditions are essential to its exercise? Dcscribe the mechanism of respiration, and the structure and general form of the respiratory organ in insects, fishes and mammalia.

# VEGETABLE PHYSIOLOGY AND STRUCTURAL BOTANY. 

Examiner, Rev. Prof. Henslow.

## WEDNESDAY, June 16.-Morning, 10 to 1.

1. Define the terms Ochrex, Vitte, Spadix, Phyllodium.
2. Describe Legumen, Drupa, Pepo.
3. What are the principal forms of pubescence?
4. Explain generally the structure of the Ovulum, and the rocolifications it undergoes in its passage to the state of a ripe seed.
5. Explain the terms Hypogynous, Perigynous, and Epigynous; and illustrate them by a slight sketch or diagran.
6. How do you express the "Divergence" which regulates the spiral arrangement of foliaceous organs?

Deseribe the specimens, marked Nos. 1, 2, 3, 4, 5, 6 .

$$
\text { IVEDNESDAY, June 16.-AFTERNOON, } 3 \text { to } 6 .
$$

1. Describe what is intended by Raphides and Biforines.
$\because$ Define the Orthotropous condition of seeds, and mention the other conditions which contrast with it.
2. What is there peculiar in the tissue of Conifere?
3. In what way may we consider Humus useful to the nutrition of plants?
4. From what sources do plants obtain their nitrogen ?
C. What are the substances chiefly found in the proper juices of plants, and from which it is considered they assimilate the materials essential to their development?

Describe the specimens, marked Nos. 1, 2, 3, 4, 5, 6.

## CLASSICS.

TUESDAY, June 22.-Morning, 10 to 1.

# ENGLISH PROSE COMPOSITION. 

Examiner, Rev. Dr. Jerrard.

## Subject:

Vincet amor patrix laudumque immensa cupido.

$$
\text { TUESDAY, June 22.-AFTERNOon, } 3 \text { to } 6 .
$$

## GREEK.

Examiner, Mr. Burcham.

## I. Re-translate into Greek Prose:

And yet consider what was the conduct of your ancestors in these particulars; for if you would be taught how to do your duty, you need not look to other countries for examples; you have them in your own state. To Themistocles, who commanded in the sea-fight at Salamis; to Miltiades, the general at Marathon ; to many others, whose services were far greater

Hian those of our present generals, they never erected brazen statues; they did not over-caress them, but honoured them in such a manner as not to consider them superior to themselves. For is there a man that will say the sea-fight of Themistucles, at Salamis, but of the Athenians; not the engrgement at Marathon, by Miltiades, but by the state. But now we are continually hearing, that Timotheus took Corcyra, that Iphicrates cut to picces the Lacedwmonian more, that Chabrias gained the naval victory at Naxos. 'Thus you seem to resign all your share in these transactions by the extravagant honours which you have heaped upon your gencrals.

## II. 'Iranslate into Greek Prose:

Studies serve for delirht, for ornament, and for ability. Their chicf use for delight is in privateness and retiring ; for omament, is in discourse ; and for ability, is in the judgment and disposition of business; for expert men can execute, and perhaps judge of particulars, one by one: but the general counsels, and the plots and marshalling of affairs come best from those that are learned. To spend too much time in studies, is sloth; to use them too much for ormament, is affectation ; to make judgment wholly by their rules, is the humour of a scholar: they perfect nature, and are perfected by experience: for natural abilities are like natural plants, that need pruning by study; and studies themselves do give forth directions too much at large, except they be bounded in by experience. Crafty men contemm studies, simple men admire them, and wise men use them; for they teach not their orrn use; but that is a wisdom withont them, and above them, won by observation.

# IVEDNESDAY, June 23.-Morning, 10 to 1. 

# LATIN. (First Paper.) 

Examiner, Rev. Dr. Jerrard.

## Translate:

## (A.) TERENCE*, Heautontimorumenos.

Men. Chreme, tantumne est ab re tua otii tibi, 23
Aliena ut cures; eaque, nihil quæ ad te attinent?
Cir. Homo sum : humani nihil a me alienum puto.
Vel me monere hoc, vel percontari puta.
Rectum'st, ego ut faciam : non est, te ut deterream.
Men. Mihi sic est usus: tibi ut opus facto'st, face.
Cir. An cuiquam est usus homini, se ut crucict? Mex. Mihi.
Cri. Si quid laboris est, nollem: sed quid istuc mali est, 30
Quasso? quid de te tantum meruisti? Mex. Eheu.
Cir. Ne lacruma; atque istuc, quicquid est, fac me ut sciam:
Ne retice: ne verere: crede, inquam, mihi,
Aut consolando, aut consilio, aut re juvero.
Men. Scire hoc ris? Cif. Hac quidem causa, qua dixi tibi.
Men. Dicetur. Cii. Istos rastros interea tamen 36
Adpone : ne labora. Mex. Minime. Cir. Quam rem agis?
Men. Sine, vacivom tempus ne quod dem mihi
Laboris. Cir. Non sinam, inquam. Mev. Ah, non æquom facis.
Cii. Hui, tam gravis hos, queso? Men. Sic meritum'st meum.
C'ir. Nunc loquere. Men. Filium unicum adolescentulum Habeo: ah, quid dixi, habere me? imo habui, Chreme:
Nunc habcam, necne, incertum'st.

[^2]
## (B.) CICERO*, Ep. ad Atticum, IV. 8.

Apenas vix discesserat, quum epistola. Quid ais? Putasne fore, ut legem non ferat? dic, oro te, clarius : vix cuim mihi exaudisse videor. Verum statim fac ut sciam, si modo tibi est commodum. Ludis quidem quonian dies est additus, eo etiam melius hic cum diem cum Dionysio conteremus. De Trebonio prorsus tibi assentior. De Domitio,


quam est ista $\pi$ ерiotuols nostrae: vel quod ab iisdem, vel quod practer opinionem, vel quod viri boni nusquam. Vinum dissimile, quod huic merito. Nam de ipso casu nescio, an illud melius. Quid enim hoc miserius, (quam cum, qui tot amnos, quot habet, designatus consul fuerit, fieri consulem non posse? praesertim quum aut solus, ant certe non plus (quann cum altero petat. Si vero id est, quod nescio an sit, ut non minus longas iam in codicillorum fastis futurorum consulum paginulas habeat, quam factorum; quid illo miscrius, nisi res publica? in qua ne speratur quidem melius quidquam.

## (C.) Cicero*, de Natura Deorum, II. 57.

Quis vero opifex, prater naturam, qua nihil potest esse callidius, tantam sollertiam persequi potuisset in sensibus? Qua primum oculos membranis tenuissimis restivit et sepsit: quas primum perlucidas fecit, ut per eas cerni posset; firmas autem, ut continerentur. Sed lubricos oculos fecit et mobiles, ut et declinarent, si quid noceret, et adspectum, quo vellent, facile converterent. Aciesque ipsa, qua cernimus, quae pupilla vocatur, ita parva est, ut ea, quae nocere possint, facile ritet; palpebraeque, quae sunt tegmenta oculorum, mollissimae tactu, ne laederent aciem, et aptissime factae sunt et ad claudendas pupillas, ne quid incideret, et ad aperiendas: idque providit, ut identidem fieri posset cum maxima celeritate.

[^3]Munitaeque sunt palpebrae tanquam vallo pilorum : quibus et apertis, oculis si quid incideret, repelleretur ; ct somno commirentibus, cum oculis ad cernendum non egeremur, utrique tamquam involuti quiescerent. Latent praeterea utiliter, ci excelsis undique partibus sepiuntur. Primum enim superiora, superciliis obducta, sudorem a capite et a fronte defluentem repellunt. Genae deinde ab inferiore parte tutantur subiectae leniterque eminentes. Nasusque ita locatus est, ut quasi murus oculis interiectus esse videatur. Auditus autem semper patet; eius enim sensu ctian dormientes egemus : a quoquum sonus est acceptus, etiam a somno excitamur. Flexuosum iter habet, ne quid intrare possit; quod posset, si simplex et directum pateret. Provisum ctiam, ut si qua minima bestiola conaretur irrumpere, in sordibus aurium, tamquam in visco, inhæresceret.

1. (A.) What is the character of Terence as a writer? On what point do his plays most strikingly exhibit the low tone of moral feeling which prevailed among those for whom they were written? What interesting ancelote is connected with line 25 of this extract; and what reflections does that incident naturally suggest?

Explain the difference between taceo, obticeo and reticeo. Is there any metrical oljection to the line 30 as here given, and to the reading racuum for vacivom in line 38?
2. (B.) What light do Cicero's letters throw upon the character of their author at the most important and trying periods of his life?
3. (C.) Give a sketch of Cotta's arguments in the First Book De Nat. Deorem, and also of Balbus's replies; with obscrvations of your own upon them.
4. Express in Latin the following sentences:-"I fear that you have undertaken this labour in vain." "I fear that he may not come in time." "There is no reason why you should envy those whom people call great and fortunate." "I know who thou art." "I know not who thou art." How would the last two phrases be expressed in Greek?

Translate into Latin prose:
Milton, Tractate on Education.
But if you can accept of these few obserrations which have flowered off, and are, as it were, the burnishing of many studious and contemplative years, altogether spent in the search of religious and civil knowledge, and such as pleased you so well in the relating, I here give you them to dispose of:

The end then of Learning is to repair the ruins of our first parents, by regaining to know God aright, and out of that lnowledge to love him, to imitate him, to be like him, as we may the nearest by possessing our souls of true virtue, which being united to the heavenly grace of faith makes up the highest perfection. But hecause our understanding camot in this body found itself but on sensible things, nor arrive so clearly to the knowledge of God and thinge invisible, as by orderly coming over the visible and inferior creature, the same method is necessarily to be followed in all discreet teaching. And seeing every mation affords not experience and tradition enough for all kind of Learning, therefore we are chiefly taught the languages of those people who have at any time been most industrious after wisdom.

# WEDNESDAY, June 23.-AFTERNOON, 3 to 6. 

## GREEK.

Examiner, Mr. Burcham.

Translate:
(A.) HOMER*, Iliad, Book XXIII. 373-397.


























[^4](B.) SOPHOCLES*, CEmipes Tyranvis, ver. 1241—12f4.



 $\kappa а \lambda \epsilon i ̂ ~ \tau o ̀ v ~ \eta ้ \delta \eta ~ \Lambda a ́ i ̈ o v ~ \pi a ́ \lambda a \iota ~ v є к р о ́ v, ~$









 үиvаîка́ т' oú үuvaîка, $\mu \eta т р ผ ́ a \nu ~ \delta ' ~ o ̈ т т о и ~$




 є้к $\lambda \iota v \in \kappa о \check{\imath} \lambda a \kappa \lambda \eta \hat{\eta} \theta \rho a$, ка̉ $\mu \pi i \pi \tau \tau \epsilon \iota \sigma \tau \in ́ \gamma \eta$. oṽ $\delta \eta \grave{\eta} \kappa \rho є \mu a \sigma \tau \eta े \nu \tau \eta े \nu ~ \gamma ข v a i ̂ \kappa ' ~ \epsilon ่ \sigma \epsilon l \delta o \mu \epsilon \nu$,
 ő $\pi \omega$ s o̊ pâ vıv, סєเvà $\beta \rho \nu \chi \eta \theta \epsilon i$ ч тá入as,






 ả $\lambda \lambda$ ' Є่v бко́т т тò $\lambda$ oumòv ov̂s $\mu \epsilon ̀ v$ ov̉火 єै $\delta \epsilon \iota$ ó

* Edit. Hermann.


## (C.) HERODOTUS*, Book III. chap. xxxii.

 үєтаı $\lambda o ́ \gamma o s . ~ " E \lambda \lambda \eta \nu \epsilon \varsigma ~ \mu e ̀ v ~ \gamma a ̀ ̀ ~ \lambda e ́ \gamma o v \sigma \iota ~ K a \mu \beta v ́ \sigma \epsilon a ~ \sigma v \mu \beta a-~$

















## (D.) THUCYDIDES $\dagger$, Book III. chap. xl.
















[^5]




## (E.) DEMOSTHENES*, De Corona.




















 $\sigma v \gamma \tau \in \lambda \in i ̂ s$.

1. Show by instances of their usage in Homer that $\grave{i} \mu \phi \hat{i}$ and $i \mu \phi i s$ are properly the same. What is the radical menning of either, and what is the established rule with respect to $\dot{i} \mu \phi i s$, when it is used in Homer as a preposition?
2. What is the rule when an Iambic Trimeter ends with a Cretic or Quasi-Cretic? Give instances in which it is riolated. What limitation obtains in the resolved or trisyllabic feet of the Comic Iambic 'Trimeter? What is the quantity

[^6]of the second syllable of àvcapòs in Sophocles, Euripides, and Aristophanes respectively?
3. Mention the principal events recorded in the third book
 ... in extract (D.), by any instance from modern history. What authorities have we that IIcrodotus read his history at any of the Grecian festivals?
4. Give the meaning and quantitics of $\sigma \iota \gamma a$ according to its different accents. Show generally the difference of construction between $\chi p i$ ind $\delta \in \hat{i}$. What is Hermann's opinion with respect to the omission of the augment in the Tragic writers? Point out accurately in extract (B.) the difference between the aorist and future conjunctives.
5. Give a brief account of the $\sigma v \mu \mu$ pial at Athens. Mention the different $\lambda$ ectovpyial to which the citizens were subject. Under what circumstances was a person exempted from the Trierarchy? What is the subject of the oration against Leptines, and about what time was it delivered?
6. Give the date of the Phocian war. How does Demosthenes defend himself against the charge brought by Eschines respecting its origin? What was the office of the Colacreta? What pay did each senator receive, and what would be the whole annual amount of the wages of the senate?

## THURSDAY, June 24.-Morning, 10 to 1.

## GREEK.

Examiner, Rev. Dr. Jerrard.

Translate:

(A.) AESCHYLUS*, Agameminon.

ėmè $\delta^{\prime}$ ảváyка

ăvayvov, ảvlepov, тó $\theta \in \nu$

Bpotoùs $\theta \rho a \sigma u ́ v \in \iota ~ \gamma u ̀ \rho ~ a i \sigma \chi \rho o ́ \mu \eta \tau \iota s ~$
тú̀аıva таракотй


каi тротé $\lambda \epsilon \epsilon a$ va $\omega \nu^{\circ}$


230


$\pi \in ́ \pi \lambda o \iota \sigma \iota \pi \epsilon \rho \iota \pi \epsilon \tau\rangle$,
$\pi а \nu \tau \grave{\tau} \theta \nu \mu \hat{\omega} \pi \rho о \nu \omega \pi \hat{\eta}$ 234
 ф Өóryov ảpaîov oìкоıs,
ßlą $\chi a \lambda \iota \nu \omega ิ \nu ~ \tau^{\prime}$ ảvav́ $\delta \omega \varphi$ $\mu$ ével.







aî̀va $\phi(\lambda \omega s$ ėtíha.

[^7]
## (B). ARISTOPHANES*, Aves.

















## (C.) PLATO†, Phedo, XXIX.





 каi cimó $\omega \omega \lambda \epsilon$, $̈ s ~ \phi a \sigma u v ~ o i ~ \pi о \lambda \lambda o i ~ a ̈ v \theta \rho \omega \pi o \iota ; ~ \pi o \lambda \lambda o \hat{v} \gamma \epsilon ~ \delta \epsilon i ̂, ~$














[^8]
## (D.) ARISTOTLE*, Ethica, VII. 1.








 єìvaı $\mu$ á入л












1. Cite any instances of Oriental diction and imagery which occur in the Agamemmon, and give your opinion, generally, of this celebrated Play: Quote passages from other authors illustrative of the extract (A.) and referring to the fate of Iphigenia.

2. Mention the various authors and the several traditions alluded to in the extract (B.). With what design does the Comedy of the Birds seem to have been written? Wherein consists the great value of the works of Aristophanes? What are the chicf oljections to them? What do you observe as most remarkable in the original conceptions of his Comedies and in the working of then out in detail? In what respects does Swift appear to you to have most resembled, and in what to have most differed from him?

Give a short account of the metre of this extract.

[^9]3. (C.) In what language does Cicero express the leading thoughts contained in this passage?
4. Explain the following words as used by Aristotle:- $\delta$ é-
 рเб七s, $\pi \alpha ́ p o \delta o s, ~ \sigma \tau a ́ \sigma \iota \mu o v . ~$

THURSDAY, June 24.-AFTERNOON, 3 to 6.

LATIN.
Examiner, Mr. Burcham.

Translate:

## (A.) LUCRETIUS*, Book V.

His igitur rebus subjunctis, suppositisque: Terra superne tremit magnis concussa ruinis
Subter, ubi ingenteis speluncas subruit ætas, Quippe cadunt toti montes, magnoque repente Concussu, late disserpunt inde tremores; Et merito, quoniam plaustris concussa tremiscunt Tecta viam propter non magno pondere tota: Nec minus exsultant, ubi currus fortis equûm vis Ferratos utrinque rotarum succutit orbeis. Fit quoque, ubi magnas in aquæ, vastasque lacunas
Gleba vetustate e terra provolvitur ingens,
Ut jactetur aqua, et fluctu quoque terra vacillet:
Ut vas in terra non quit constare, nisi humor
Destitit in dubio fluctu jactarier intus.
Preterea, Ventus cum per loca subcava terre
Conlectus parti ex una procumbit, et urget

[^10]Obnixus magnis speluncas viribus altas;
Incumbit tellus, quo venti prona premit vis: Tum, supera terram quer sunt exstructa domorum, Ad coclumque magis quanto sunt cdita quarque, Inclinata minent in candem prodita partem; Protractrque trabes impendent ire paratr: Et metuunt magni Naturam credere Mundi Exitiale aliquod tempus, clademque manere, Cum videant tantam Terrarum incumbere molem. Quod nisi respirent Venti, non ulla refrenet Res, neque ab exitio possit reprendere eunteis: Nunc quia respirant alternis, inque gravescunt, Et quasi conlecti redeunt, ceduntque repulsi ; Sæpius hanc ob rem minitatur Terra ruinas, Quam facit: inclinatur enim, retroque recellit, Et recipit prolapsa suas se in pondere sedeis. Hac igitur ratione vacillant omnia tecta, Summa magis mediis, media inns, ima perhilum.

> (B.) VIRGIL*, Eveid, Book VI.

Principio coclum ac terras, camposque liquentis, Lucentemque globum Luna, Titaniaque astra, Spiritus intus alit, totamque infusa per artus Mens agitat molem, et magno se corpore miscet. Inde hominum pecudumque genus, viterque volantum, Et quæ marmoreo fert monstra sub æequore pontus. Igneus est ollis vigor et coelestis origo Seminibus, quantum non noxia corpora tardant, Terrenique hebetant artus, moribundaque membra. Hinc metuunt, cupiuntque; dolent, gaudentque; neque auras Dispiciunt clausæ tenebris et carcere cæco. Quin et supremo quum lumine vita reliquit, Non tamen omne malum miseris, nec funditus omnes
Corporees excedunt pestes ; penitusque necesse est Multa diu concreta modis inolescere miris.
Ergo exercentur poenis, veterumque malorum

Supplicia expendunt. Aliæ panduntur inanis Suspensæ ad ventos: aliis sub gurgite vasto Infectum eluitur scelus, aut exuritur igni ; Quisque suos, patimur, Manis; exinde per amplum Mittimur Elysium, et pauci leta arva tenemus: Donec longa dies, perfecto temporis orbe, Concretam exemit labem, purumque reliquit Wtherium sensum, atque aurai simplicis ignem. Has omnis, ubi mille rotam volvere per annos, Lethæum ad fluvium deus cvocat agmine magno: Scilicet inmemores supera ut convexa revisant, Rursus et incipiant in corpora velle reverti.

## (C.) TACITUS*, AnNals, Book IV. chap. 8.

Igitur Scjanus, maturandum ratus, deligit venenum, que paullatim inrepente, fortuitus morbus adsimularetur: id Druso datum per Lygdum spadonem, ut octo post annos cognitum est. Ceterum Tiberius, per omnes valetudinis cjus dies, nullo metu, an ut firmitudinem animi ostentaret, etiam defuncto, necdum sepulto, curiam ingressus est: consulesque, sede vulgari per speciem mocstitia sedentes, honoris locique admonuit; et effusum in lacrimas Senatum, victo gemitu, simul oratione continua erexit. "Non quidem sibi ignarum, posse argui, quod tam recenti dolore subicrit oculos Senatus: vix propinquorum adloquia tolerari, vix diem adspici a plerisque lugentium: neque illos imbecillitatis damnandos: se tamen fortiora solatia e complexu Reipubl. petivisse." Miscratusque "Augustex extreman sencetam, rudem adhuc nepotum, et vergentem atatem suam, ut Germanici liberi, unica presentium malorum levamenta, inducerentur," petivit. Egressi Consules, firmatos adloquio adolescentulos deductosque ante Cæsarem statuunt. Quibus adprehensis, "Patres conscripti, hos," inquit, " orbatos parente, tradidi patruo ipsorum, precatusque sum, quamquam esset illi propria soboles, ne secus, quam suum sanguinem, foveret ac tolleret, sibique et posteris conformaret. Erepto Druso, preces ad vos converto, Diisque

[^11]et patria coram obtestor, Augusti pronepotes, clarissimis majoribus genitos, suscipite, regite: vestram meamque vicem explete. Hi vobis, Nero et Druse, parentum loco: ita nati estis, ut bona malaque restra ad Rempubl. pertineant."

## (D.) JUVENAL*, Satire XIV.

Sed qui sermones? quam fodx buccina famæ?
Quid nocet hoc? inquit. Tunicam mihi malo lupini,
Quam si me toto laudet vicinia pago
Exigui ruris paucissima farra secantem.
Scilicet et morbis et debilitate carebis
Et luctum et curam effugies, et tempora vitæ
Longa tibi post hæc fato meliore dabuntur,
Si tantum culti solus possederis agri,
Quantum sub 'Tatio populus Romanus arabat.
Mox etiam fractis æctate ac Punica passis
Prelia rel l'yrrhum immanem gladioscruc Molossos
Tandem pro multis vix jugera bina dabantur
Vulneribus. Merces ea sanguinis atque laboris
Nullis visa umquam meritis minor, aut ingrate
Curta fides patrix. Saturabat glebula talis
Patrem ipsum turbamque casæ, qua feta jacebat
Uxor et infantes ludebant quatuor, unus
Vernula, tres domini: sed magnis fratribus horum
A scrobe vel sulco redeuntibus altera cona Amplior et grandes fumabant pultibus ollæ. Nunc modus hic agri nostro non sufficit horto. Inde fere scelcrum causne, nec plura venena Miscuit aut ferro grassatur sxpius ullum Humanæ mentis vitium, quam sæva cupido Indomiti census: nam dives qui fieri vult, Et cito vult fieri.

1. About what time did Lucretius flourish? Quote from his first book the verses in commendation of Epicurus. Mention the extant writings of the latter. In what way, ac-

[^12]cording to his system, does perception take place? From whom did he chiefly borrow his plyssical doctrines?
2. Give a short explanation of the doctrines put forth in extract (B.). Mention the chief points of difference between Virgil and Homer in their description of the infernal regions and the state of the dead.

## Symæthia circum

Flumina; pinguis ubi et placabilis ara Palici. AEneid, ix. 585.
Where was the river Symacthus, and what is the fable respecting the Palici?
3. What is meant by 'sede vulgari' in extract (C.)? Give any instance in which the Latinity of Tacitus differs from that of the Augustan age. Eixplain the construction of the Roman Calendar, and express, according to that system, March 16, June 27, July 11, September 4.
4. Give the character of Sejanus as described by Tacitus. Where was he born? Translate and explain the following passage:-

Idem populus, si Nursia Tusco
Favisset, si oppressa foret secura senectus Principis, hac ipsa Sejanum diceret hora Augustum. Juv. Sat. x. 77.
5. What were the "actiones prectorix," and with what proceedings in our own country do they correspond? In what respects did the Roman 'judices' differ from the jurors of modern days? How were the 'centumviri' selected, and to what was their juriscliction chiefly restricted previous to the time of Augustus?
6. Give the etymology and primary meaning of:-opportunus, anceps, ambiguus, municeps, manceps, minister, mugister, periculum, peritus, udulari, inyens, integer, arbiter.

# EXAMINATION 

IN THE

HEBREW TEXT OF TIIE OLD TESTAMENT, IN THE GREEK TEXT OF TIIE NEW, AND IN

SCRIPTURE HISTORY.

## EXAMINATION

## IN THE

HEBREW TEXT OF THE OLD TESTAMENT, IN THE GREEK TEXT OF THE NEW, AND IN SCRIPTURE HISTORY.

$$
\text { TUESDAY, June 29.-Morning, } 10 \text { to } 1 .
$$

IIEBREW TEXT OF THE BOOK OF GENESIS.
Examiner, Rev. T. Stone.

1. Translate:

Genesis, I. 9-13.




 וַּיּהִי־בֵן


Mrer . Derive this word, and form a paradigm of its conjugations, tenses, \&c.

Dind What is the derivation of this word? In what number is it, and how is that accounted for?
 this construction? State the rule respecting it. What is the

2. Translate literally :

$$
\text { Genesis, XXIV. } 15-26 .
$$



















State the derivation and literal meaning of the following

 \&c., of this word, and explain any peculiarity there may be in its form.
3. In what manner do you distinguish between the article $\boldsymbol{\pi}$ and the interrogative $\boldsymbol{A}$ prefixed to a word? State the rules for the pointing of each, illustrating them from any of the extracts in this paper.
4. Translate:

## Genesis, XVII. 15-18.







5. Give a list of the personal pronouns, separable and inseparable, with the manner (i. e. with what vowel-points) the latter are affixed to nouns and verbs respectively.
6. Translate:

## Genesis, XLIX. 22-26.









7. Give a short account of the nature of Hebrew poetry.
8. Translate into Hebrew:

So it is (that) Abram (is) a son of ninety years and nine years, and is seen Jehoval to Abram, and he says to him, I am God Almighty, walk before me and be perfect.

$$
\text { TUESDAY, June 29.-AFTERNOON, } 3 \text { to } 6 .
$$

## GOSPEL OF ST. LUKE.

Examiner, Rev. W. Drake.

1. What inference may be drawn from the style of langruage in which this Gospel is written, respecting the parentare and education of its author? What is known respecting Luke previous and subsequent to his conversion to Christianity?
2. Mention some of the miracles and parables which occur in this Gospel only; also some words which are peculiar to Luke's Gospel. Who are some of the more important witnesses in the unanimous testimony of antiquity to the genuineness and authenticity of this Gospel?
 pression classical? if not, correct it. Who was this Iferod? In what way was he connected with other IIerods who occupied the throne of Judea? What remarkable prophecy connected with the advent of Messiah was fulfilled in his person?






Explain from what time the date of the reign of Tibcrius must be reckoned. Assign to the several places mentioned in this passage their relative geographical positions. What is known respecting the duties and authority of a Procurator and a Tetrarch ?

















 $\pi a \rho a \lambda є \lambda \nu \mu \epsilon ́ v\left(\varrho^{\circ}\right)$ )

 $\xi a ́ \zeta \omega \nu$ тòv $\theta$ єóv.

Translate the above passage and accompany your translation with such remarks, critical and explanatory, as you may consider necessary for its elucidation.
 common translation of this passage? Point out the grammatical reasons which determine the meaning of $\pi \rho \sigma \sigma \epsilon v \chi \eta$ in this place. From what author do we learn the usual situation of the proseuche?








Translate this passage. What is the foree of ovai and of ìmé $\chi \epsilon \tau \epsilon$ ? Is тoîs $\mu \iota \sigma 0 \hat{v} \sigma u y$ classical construction? It has been disputed whether the use of the Dative here be a Latinism or not: from what other language may it have been derived?
8. Chap. x. l-6. Meтà סè тav̂ta àveঠeitecv ó Kúplos












What would be the Hebrew idiom for iveic סóo? Was there any difference between the $\dot{\text { umóorn } \mu a \text { and the } \sigma \dot{v} v \delta a \lambda o v ? \text { ?uote }}$ parallel expressions from the New Testament to illustrate the meaning of viòs cipク́vns.
9. evoos $\delta$ é è $\sigma \iota$ रpecia.-What is the literal meaning of this expression?







Translate and paraphrase these verses.






 $\kappa а т а ̀ ~ \tau \eta ̀ \nu ~ \epsilon ่ v \tau о \lambda \eta ́ v . ~$

Translate. What is the meaning of є่vєтú $\lambda \iota \xi \in v$, тapa-
 mand was this, and where enjoined ?
12. Explain and derive the following words:- $\phi \iota \omega \theta \eta \tau \iota-$



WEDNESDAY, June 30.-MORNIN(i, 10 10 1.

## SCRIPTURE HISTORY.

Examiner, Rev. 'I. Stone.

1. Give a general geographical description of the Land of Canaan, and mention the nations by whom it was possessed in the times of Abraham, Isaac and Jacol. From whom were these nations descended?
2. How long was Joshua in subduing the country sufficiently to enable him to divide it among the tribes? State accurately the circumstances of this division, and the situations of the several tribes. Why were two and a half tribes located eastward of Jordan, and upon what principles was a double portion assigned to the tribe of Joseph ?
3. Give a description of the Tabernacle as erected by Moses, and a short account of the removals of it (the Tabernacle) and the Ark from the passage across Jordan till their establishment at Jerusalem. Is the last-named event celebrated in any extant piece of Hebrew poetry?
4. Give a short historical account of the Jewish nation from the death of Josiah till the termination of babylonish captivity.
5. Give a short account of the history of Esther. At what time did these events happen? What is the (supposed) classical name of the Ahasuerus here mentioned, and what is related of him by Herodotus or others? State precisely in what manner the Jews were indebted for their safety to the Pur or lot.
6. What were the most remarkable points of difference between the first and the second Temples?
7. What were the political circumstances of Palestine at the birth and at the death of Jesus Christ? Compare the divisions of the country at the latter period with those in the time of Joshua.
S. State particularly the circumstances which led to St. Paul's imprisonment under Felix and Festus, and the reason of his appeal to the Emperor at Rome.
8. Give a short account of the prophets Ezekiel and Jeremiah ; especially notice the times and places where they respectively delivered their prophecies, and the condition of those to whom they were immediately addressed.
9. Give a short account of the life and writings of St. John the Apostle.

## WEDNESDAY, June 30.-AFTERNOON, 3 to 6.

## PALEY'S EVIDENCES. BUTLER'S ANALOGY.

Examiner, Rev. W. Drake.

## PALEY.

1. Answer the objection, "that it is contrary to experience that a miracle should be true, but not contrary to experience that testimony should be false."
2. Show that from the nature of the case the first propagators of Christianity would probably meet with persecution in addressing the heathen public : and give the testimony of heathen authors to prove that such persecution actually took place.
3. How does the claim to miraculous power made by Christians in succeeding ages bear upon the general argument for the miraculous character of Christianity?
4. What is the main point in an argument concerning the genuineness of ancient writings? Mention some of the collateral considerations which may be adduced in support of the genuineness of our New Testament Scriptures; and enter fully upon that which arises from the style and language in which they are written.
5. "Our historical Scriptures were attacked by the early adversaries of Christianity, as containing the accounts upon which the Religion was founded." Give a proof of this assertion.
6. Show that particularity is, in a certain degree, a mark of historical truth; and state the circumstance which renders its presence of especial value in the New Testament. Mention some of the most striking instances of particularity in the New Testament.
7. State the most important of the distinctions which may be drawn between the miracles wrought by Christ and his followers, and all other performances that have ever been subsequently advanced as instances of miraculous power.
8. Show from Scripture that the preference of the patient to the heroic character is characteristic of the Christian institution. How does this peculiarity bear upon the general argument for the truth of Christianity?
9. Give instances of the candour of the writers of the New Testament; and also of the naturalness and the properties observable in their writings.
10. In comparing the rapid spread of Mahometanism with that of Christianity, no inference can fairly be drawn from the former to the prejudice of the argument from the latter.
11. Want of universality in the reception of the Christian religion is no argument against its truth.
12. State the erroneous premises which have led persons to argue against Christianity from its supposed effects upon mankind.

## BUTLER.

1. State and illustrate fully the distinction between probable and demonstrative evidence.
2. Show from the analogy of nature that in the government of God by rewards there is nothing incredible arising out of the notion of rewarding.
3. "The present state of the world is peculiarly fitted to be a state of discipline for our improvement in virtue and piety."
4. Prove that there can be no peculiar presumption, from the analogy of nature, against supposing a revelation when. man was first placed on the earth.
5. Show from the analogy of nature that there is no just presumption against the general notion of a mediator between God and man.
6. What distinction does Butler draw between the case of a prince or master giving orders to a servant, and that of God giving a revelation to the world, in order to meet the objection which has been made to the scheme of Christianity as not being sufficiently plain and explicit?

## CANDIDATES

## ADMITTED TO THE DEGREE OF BACHELOR OF ARTS.

1841. 

First Division.
Colleges.
William Allen St. Cuthbert's, Ushaw.
Philip Pearsall Carpenter... Bristol, and Manchester (York).
Thomas Charlton ....................... St. Cuthbert's, Ushaw.
Thomas Clark
Highbury.
John Coupe ................................ St. Mary's, Oscott.
Samuel Coulter Davison............ University.
Christopher Newman Hall ...... Highbury.
William Henry Herford... ........ Manchester (York).
Thomas Hunton ....................... University.
John Kendall ........................... Manchester (York).
Thomas Tucker Longman............ St. Mary's, Oscott.
Arthur Lupton ........................ Manchester (York).
Samuel Newth.............................. University.
George Vance Smith ................... Manchester (York).
Henry Watts .......................... University.
Bernard Bolingbroke Woodward Highbury.
Hale Wortham ......................... King's.
William Wrennall .................. St. Cuthbert's, Ushaw.
Thomas Wright ........ .............. St. Cuthbert's, Ushaw.
Second Division.


# EXAMINATION FOR HONOURS. 

MATHEMATICS AND NATURAL PHILOSOPHY.<br>Samuel Newth<br>$\qquad$<br>University College.<br>CLASSICS.<br>Samuel Coulter Davison ................ University College.

# EXAMINATION IN THE HEBREW TEXT OF THE OLD TESTAMENT, IN THE GREEK TEXT OF THE NEW, AND IN SCRIPTURE HISTORY. 

First Class.
Arranged alphabetically.

Philip Pearsall Carpenter<br>Manchester New College.<br>George Vance Smith.<br>Manchester New College.

Second Class.
Samuel Coulter Davison ............ University College.

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[^0]:    * Edit. Arnold.

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